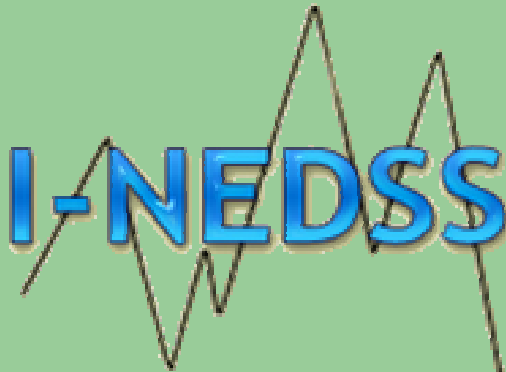# Illinois National Electronic Disease Surveillance System PHIN 2005 Conference May 11, 2005

I-NEDSS

Illinois Department of Public Health

Judy Kauerauf, I-NEDSS Administrator
Infectious Diseases

Sree Nair, Project Lead
Integrated Software Specialist

Presentation Outline

- Review I-NEDSS Goals & Architecture
- Provide an Update on Implementation & Development
- Demonstrate Release 4.0
  - Showing Provider Reporting
  - ELR from State Lab
  - Public Health Management of Cases
  - iDetect
  - I-NEDSS Reports
- Question and Answer

I-NEDSS Guiding Principles

- **Easy and quick**
- **Cost efficient**
- **One system, not multiple**
- **Complete**
- **Not drastically different**
- **Allows flexible reporting features**
- **Helps us do our jobs more efficiently**

Development Process:
User Input, Feedback
& Change Control Board

- **Analysis with Program (Subject Matter Experts)**
- **Advisory Groups**
  - **I-NEDSS Executive Steering Committee**
  - **Division of Infectious Diseases I-NEDSS Advisory Panel**
  - **LHD I-NEDSS Advisory Panel**
- **System Coding, Testing & Maintenance**
  - **Developers: Integrated Software Specialists & Pixel**
- **Change Control Board**

Illinois National Electronic Disease Surveillance System

- Built according to CDC design recommendations (Java J2EE)
- Browser-based
- Accessible from the Internet
- Username/Password protected

I-NEDSS

Software Development

- WebSphere Studio Application Developer
- Rational Enterprise Suite for application development management
- J2EE (Java 2 Enterprise Edition)
- Java Struts
- ILOG JRules rules engine integrated in code

I-NEDSS

Specialized Software

- Geographic Information System (GIS)
  - ArcIMS
  - ArcGIS
  - ArcSDE
- Business Intelligence Products
  - Business Objects
  - ILOG JRules
- VMware

I-NEDSS Current Functionality

- **Provider Reporting**
- **Local Health Department Morbidity Reporting**
- **Complete Disease Modules (PAM) for:**
  - **Enteric Diseases**
  - **Vaccine Preventable Diseases**
  - **CNS Non-Bacterial Diseases/Arboviruses**

I-NEDSS Current Functionality (continued)

- **Ad Hoc Reporting with Legacy Databases**
- **Electronic Laboratory Reporting of Arbovirus Test Results from the state lab**
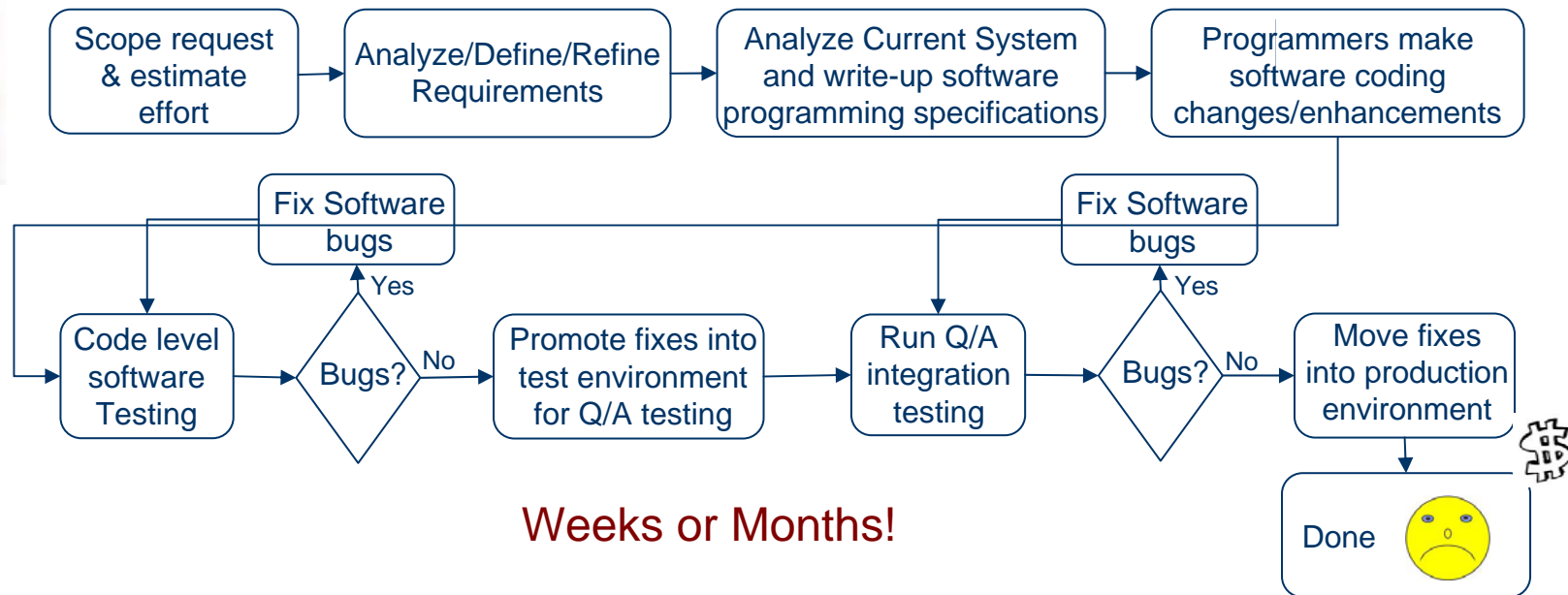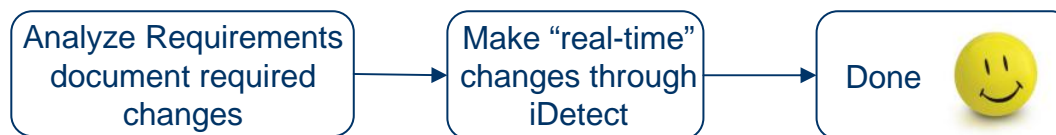
What is iDetect?

- A true solution-set for Program and Development teams
- A unique and powerful technology solution that enables the PHIN vision to be a reality
- A reusable PHIN – NEDSS solution framework that allows rapid development and maintenance and ability to respond quickly to change – with minimal IT involvement
- A NEDSS – PHIN Solution Framework that enables State and Local Public Health Departments and PHIN Partners to provide emergency response to contain outbreaks and prevent the spread of disease – statewide
- Capable of building other case management centric web applications quickly

Comparing - the Power of iDetect

The Traditional IT "Request to Completion" Project Life Cycle:

```
Scope request        Analyze/Define/Refine    Analyze Current System    Programmers make
& estimate      →    Requirements        →    and write-up software →   software coding
effort                                        programming specifications changes/enhancements
```

```
                     Fix Software                              Fix Software
                     bugs                                      bugs
                          Yes                                       Yes
Code level                                Run Q/A                            Move fixes
software  →  Bugs?  No  Promote fixes into → integration →  Bugs?  No  →  into production
Testing                  test environment    testing                        environment
                         for Q/A testing
```

Done

Weeks or Months!

With iDetect™:

```
Analyze Requirements      Make "real-time"
document required    →    changes through    →    Done
changes                   iDetect
```

Hours or Days!

iDetect Capability

Changes that could be done without traditional IT involvement and without bringing the production system down!!

- Change/Add New Diseases
- Change/Add Values to drop down
- Change/Add Question to a page
- Change/Add Screens
- Change/Add Menu
- Change/Add Security Role Access to pages
- Change/Add Error Messages
- Change/Add Rule Validation
- Associate Error message to rule validation
- Ability to react to change quickly

I-NEDSS Demonstration
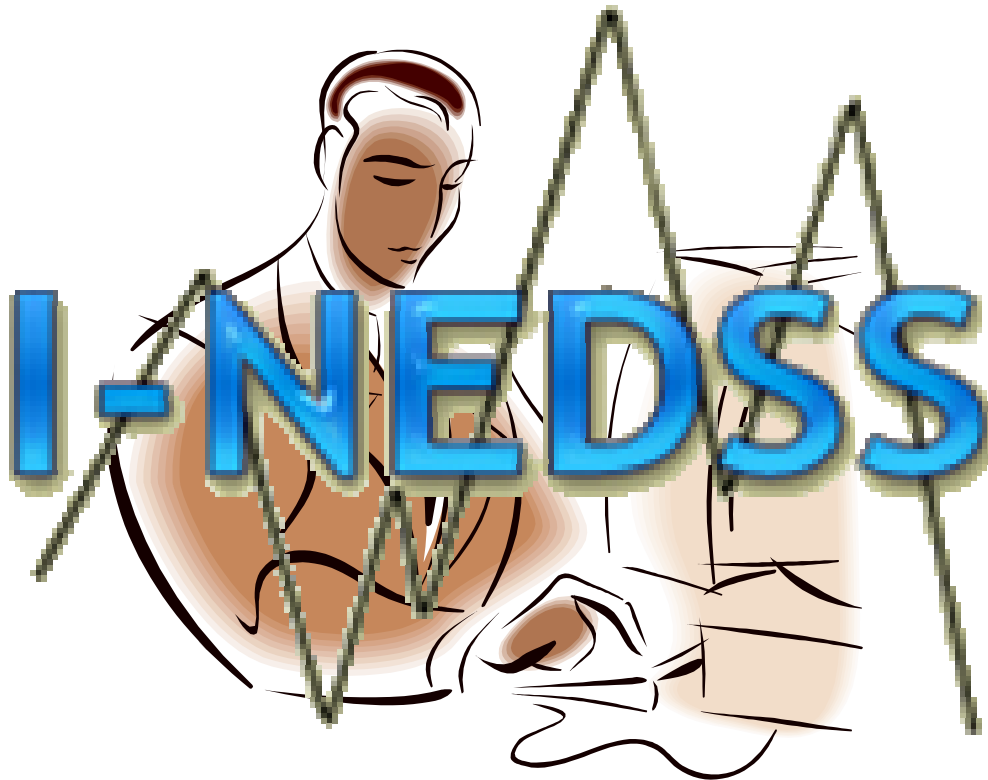
Lessons Learned

- Don't rush analysis
- Document, document, document
- Build prototypes
- Address all user issues at all user levels
- Manage changes
- Have a clear plan
- Build iteratively
- Promote and market success

I-NEDSS